PBXgateway™ II

Powerful business voice gateway designed to extend the feature-rich corporate PBX to branch offices, teleworkers, remote call center agents and third-party telephony clients over traditional and next-generation networks

Distributed Voice Solutions For The Extended Enterprise

The PBXgateway II is a high performance gateway that resides at the corporate voice system and terminates up to 24 remote users from third-party telephony clients and MCK's products including:

- EXTender™ 6000 for Branch Offices
- EXTender 4000 for IP
- EXTender 3200 for IDSL
- EXTender 3000 for ISDN[1] (DEFINITY only)
- EXTender 1000+ for Analog[2] (DEFINITY only)
- Mobile EXTender

The PBXgateway II operates in serial Remote Voice Protocol (RVP)™ mode over traditional networks and in RVPoIP™ mode over next-generation networks.

MCK's Distributed Voice Solutions affordably and seamlessly extend the features and functionality of existing corporate voice systems to branch offices, remote call center agents, telecommuters and mobile workers across traditional and next-generation networks. Our solutions provide businesses with a managed migration path to the telephony applications of the future, enabling them to leverage their investments in existing voice systems, access new applications being offered by next generation service providers, and maintain a single, unified voice system for their increasingly distributed workforces.

PRODUCT OVERVIEW

The PBXgateway II is MCK's most robust platform designed to support advanced business applications to be used by branch offices, call centers, telecommuters, and mobile workers. This new-generation gateway includes all of the features and functionality of the PBXgateway[3] and more.

The PBXgateway II is available in a 24-port configuration and is capable of terminating all of MCK's client products including the newly introduced software application, the Mobile EXTender. With MCK's PBXgateway II, your remote workers can now enjoy all the features of your corporate PBX from wherever they are. That's because the PBXgateway II extends all the capabilities of your PBX to remote employees or mobile devices over circuit- or packet-based networks.

REMOTE VOICE PROTOCOL (RVP) over Serial Connections

MCK's Remote Voice Protocol converts digital voice and phone signaling into highly efficient data packets. Sophisticated software features include a G.165-compliant echo canceller enhanced with extremely robust double-talk performance, manufacturer-provided PBX protocols and a range of industry standard voice compression options.

The PBXgateway II can be configured to operate in either a managed IP packet network or a point-to-point synchronous WAN environment over traditional networks. In a traditional WAN environment, up to two EXTender 6000 for Branch Offices can be connected into a single PBXgateway II running serial RVP. The Remote Voice Protocol relies on HDLC encapsulation over a serial port to transmit voice signals.

REMOTE VOICE PROTOCOL over IP Connections (RVPoIP)

To extend remote voice capability over a managed IP network, simply install a PBXgateway II at your corporate site and then choose a combination of remote IP client units to meet your needs. Up to 24 ports can be terminated at the PBXgateway II. Branch offices, teleworkers and remote call center agents can be connected using standard IP network termination devices such as IP routers, DSL or cable modems. MCK's RVPoIP relies on UDP/IP to transmit voice over IP networks.
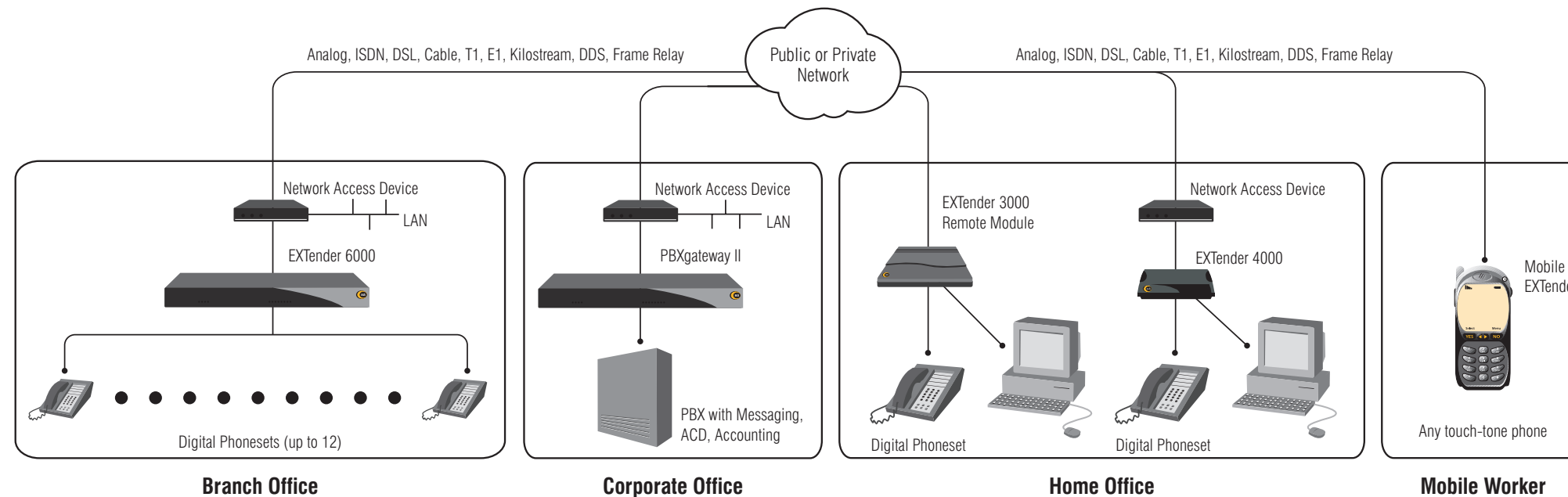
PBXgateway II

Diagram

Analog, ISDN, DSL, Cable, T1, E1, Kilostream, DDS, Frame Relay

Public or Private Network

Analog, ISDN, DSL, Cable, T1, E1, Kilostream, DDS, Frame Relay

Branch Office
- Network Access Device — LAN
- EXTender 6000
- Digital Phonesets (up to 12)

Corporate Office
- Network Access Device — LAN
- PBXgateway II
- PBX with Messaging, ACD, Accounting

Home Office
- EXTender 3000 Remote Module
- EXTender 4000
- Network Access Device
- Digital Phoneset
- Digital Phoneset

Mobile Worker
- Mobile EXTender
- Any touch-tone phone

MANAGEMENT FEATURES

MCK's business voice solutions have been designed for operational simplicity. All of the system's configuration, management, and administrative and diagnostic functions may be managed from the PBXgateway II using a direct serial connection, dial up modem, HTML, Telnet or an inband network connection from a remote client. This flexibility allows companies to maximize their system administration resources and lower operating costs.

The PBXgateway II is equipped with two dual DB-9 console ports (see picture below). These ports allow a system administrator to attach a modem to one and use the other for a local terminal connection. This versatility makes remote troubleshooting and maintenance a breeze.

FRONT VIEW

Two DB-9 console ports for easy system management.

KEY BENEFITS

■ **Flexibility**
Mix and match client modules and third-party telephony devices up to 24 ports.

Dual 10/100Base-T ports allow connection to high-speed Ethernet networks and separate segments for voice and management traffic.

Dual DB-9 console ports enable multiple management interface connections to operate simultaneously.

Configure the PBXgateway II to operate in managed IP network (Layer 3) or in traditional circuit switched and frame relay (Layer 2) environments.

■ **Increased Productivity**
Remote and mobile employees are able to access corporate PBX functions, like voicemail, call accounting systems and ACD systems.

■ **Network Efficiency**
Leverage IP data network infrastructure for both voice and data traffic.

■ **Ease-of-Use**
Simple installation process.

Easy–to-use configuration tools enable virtual management of remote users from a central location.

■ **Investment Protection**
MCK is committed to providing you with flexible product solutions for today's, and tomorrow's, needs.

KEY FEATURES

- Support for synchronous and asynchronous TA adapters

- Encrypted username and password allocated by system administrator to each port

- Network down recovery

- Call suspend mode on ISDN Iines with Asynch TA

- Support for IP Precedence and DiffServ QoS mechanisms

PBX/KTS COMPATIBILITY
- Avaya: DEFINITY® ECS (release 3 or later)

- Nortel: Meridian® and Norstar®

- Toshiba: Strata DK

GENERAL SET-UP GUIDELINES

- The PBXgateway II is deployed within 500 feet of the PBX/KTS at the corporate office

- The PBXgateway II can be configured to run on IP transport or traditional circuit switched and frame relay networks

- When running RVPoIP, the gateway can be connected to the LAN via two 10/100Base-T ports simultaneously. Either port can be configured to carry voice and/or management, allowing both traffic types to be transmitted on separate LAN segments

- When running serial RVP between an EXTender 6000 and a PBXgateway II, the network access device is connected via the DB-25 WAN ports

- Remote clients that support serial RVP are the EXTenders 6000, 3000[1], and 1000+[2] in point-to-point mode. Up to two EXTender 6000 for Branch Offices can be attached to one PBXgateway II in serial RVP mode

- Remote clients that support RVPoIP are the EXTender 6000, 4000, 3200 and 100 models

- The PBXgateway II also supports the Mobile EXTender application (DEFINITY only)

- One PBXgateway II can support both serial RVP, RVPoIP clients and Mobile EXTenders simultaneously, up to 24 ports total

- Network access device should be configured to provide Quality of Service* (QoS) support in order to guarantee voice service quality in RVPoIP applications

- The PBXgateway II is available in a 24-port configuration

- Minimal setup programming required, accomplished via dial up modem, Telnet, RS-232 console interface, inband RVP or HTML interface.

BACK VIEW

NETWORK INTERFACE · LAN 1 · LAN 2 · WAN 1 · WAN 2 · TELEPHONY INTERFACE

CONNECTORS INCLUDED IN BACKPLANE OF UNIT:

- Internal power supply

- One PCM port for network expansion cards (optional)

- Two RJ-45 10/100Base-T Ethernet for RVPoIP and Telnet/HTML system management

- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530

- One Amphenol connector for 50-pin RJ-21 cable for interface with digital telephone sets

PBXgateway II

ONLINE RESOURCES
- List of recommended network access devices available at www.mck.com in the Products & Solutions section

SOFTWARE SUPPORT
- TCP/IP protocol support for IP traffic and management access

- RVPoIP uses UDP/IP protocol for voice transmission

- Serial RVP uses HDLC encapsulation for voice transmission

- Management and Utilities – Telnet, inband RVP, RS-232 console interface, SNMP, HTML, phone display (limited features)

- Wind River's VxWorks® operating system

- Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the PBXgateway II and the EXTender 6000

VOICE PROTOCOLS
- Choice of voice compression standards:
  - G.729A (8 Kbps)
  - G.726 (24 or 32 Kbps ADPCM)
  - G.711 (64 Kbps PCM)

- G.165 echo canceller software, with MCK proprietary double-talk detection enhancement

- MCK Remote Voice Protocol (RVP)

- MCK Remote Voice Protocol over IP (RVPoIP)

- IP voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

HARDWARE
- Form Factor: Low profile, 1U rack mountable unit

Other Components:

- Motorola MPC860T processor

- 16 MB Flash Memory, 16 MB DRAM

- DSP Analog Devices 2185 (52 MIPS)

PBXgateway II	PBXgateway
Available only in a 24-port configuration	Available in 8- and 12-port configurations
Supports all of MCK's EXTenders, including the Mobile EXTender	Supports the Mobile EXTender and the EXTender 6000, 4000 and 3200
Equipped with two DB-9 console ports	Equipped with one DB-9 console port
Outfitted with two 10/100Base-T LAN ports	Outfitted with one 10Base-T LAN port

POWER SUPPLY
- Internal

- Universal auto ranging power supply

- Line voltage: 100 – 240 V

- Frequency: 47 – 63 Hz

- Maximum power consumption: 75 Watts

DIMENSIONS
- Size: 17" x 11" x 1¾" (432mm x 280mm x 44mm)

- Weight: 8.3 lbs (3.8 kg)

OPERATING ENVIRONMENT
- Temperature: 32° – 130° F (0° – 55° C)

- Relative humidity: 5 to 95% (non-condensing)

REGULATORY APPROVALS
- FCC Part 15 Class A, NRTL/CSA and CE Mark

WARRANTY
- One-year limited warranty for parts and labor

CISCO SYSTEMS

Service Provider
Solution Partner

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[1]Supported by PBXgateway II running software release 2.1 or later. Some PBXs may require a T1 card to be installed in the PBXgateway II to support EXTender 3000 Remote Modules.

[2]Supported by PBXgateway II running software release 2.1 or later and equipped with an analog client card. The analog client card is not field upgradeable.

[3]Visit www.mck.com for more information on this product.

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